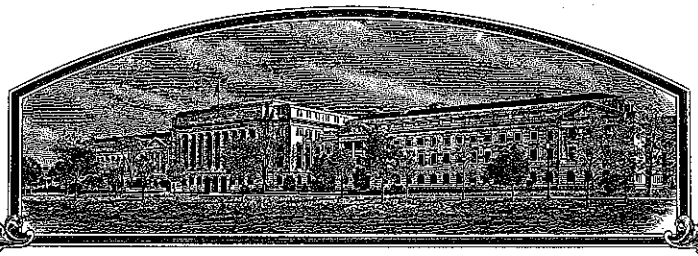
No. 200500336



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

State of Oregon, by and through the State Board of Higher Education on behalf of Oregon State University

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) MAY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'ORSS-1757'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this twenty-ninth day of September, in the year two thousand and six.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
State of Oregon, by and through the State Board of Higher Education on behalf of Oregon State University

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
OR9801757

3. VARIETY NAME
ORSS-1757

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
c/o Office of Technology Transfer
Oregon State University
312 Kerr Administration Bldg.
Corvallis, OR 97331-2140

5. TELEPHONE *(include area code)*
(541) 737-0674

6. FAX *(include area code)*
(541) 737-3093

FOR OFFICIAL USE ONLY

PVPO NUMBER
20050036

FILING DATE
9-01-2005

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Non-profit public institution of higher education

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
OR

9. DATE OF INCORPORATION

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Steven J. Adamson
P.O. Box 5997
Portland, OR 97228

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 3652.00
DATE 9-1-05

CERTIFICATION FEE:
$ 768.00
DATE 7/28/2006

11. TELEPHONE *(Include area code)*
503.248.0100

12. FAX *(Include area code)*
503.248.0105

13. E-MAIL
sja@ip-rights.com

14. CROP KIND *(Common Name)*
Wheat

16. FAMILY NAME *(Botanical)*
Graminacae

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? ***(OPTIONAL)***
☐ YES ☑ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of Variety
d. ☑ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☑ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☑ Filing and Examination Fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☑ YES *(If "yes", answer items 21 and 22 below)* ☐ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☑ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☑ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☑ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
NAME *(Please print or type)* Craig Sheward		NAME *(Please print or type)*	
CAPACITY OR TITLE Director, Technology Transfer	DATE 7/29/05	CAPACITY OR TITLE Director, Technology	DATE

(See reverse for instructions and information collection burden statement)

ST-470 (04-03) designed by the Plant Variety Protection Office using Word 2002.

INSTRUCTIONS

20050036

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $3,652 ($432 filing fee and $3,220 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvpindex.htm

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

2

PVP Application – ORSS-1757 Soft White Winter Wheat

Exhibit A - Origin and Breeding History

ORSS-1757 is a semidwarf soft white winter wheat derived from the cross 'Yamhill/Hyslop//Stephens/3/OR7946/Hill//Hill (as selection WSQ910137) /4/Sambo/Heine 4//Stephens/3/Wattines//Yamhill/Hyslop' made in 1992. OR7946 is an unreleased experimental line with the pedigree Bezostaya 1/OR69118. The pedigree of OR69118 is unknown. ORSS-1757 is an F5-derived line, identified in 1997 as a headrow and designated as OR9801757 in 1998.

The original selection was obtained from a single head from an F2 plant identified and selected at the Oregon State University Hyslop Agricultural Research Farm. The initial selection was based on spike size and fertility, maturity, semi-dwarf stature, and reaction to foliar diseases including Septoria leaf blotch and stripe rust (Puccinia striiformis). F3, F4, and F5 generations were advanced through a head to row pedigree breeding method. Selections in the F3 and F4 generation were made at a field research site near Adams, Oregon, based on plant height, maturity, spike size, reaction to stripe rust. The selection in the F5 generation was made at the Hyslop Agricultural Research Farm based on plant height, maturity, spike size, grain size, and reaction to foliar diseases including Septoria leaf blotch and stripe rust (Puccinia striiformis). A single F5 row was bulked and subsequently given the identification OR9801757.

In the F6 generation, ORSS-1757 (OR9801757) was evaluated in a single unreplicated yield trial. In addition to previous traits, ORSS-1757 was then evaluated and selected for grain yield, grain test weight.

Beginning in the F7 generation, ORSS-1757 was evaluated in multilocation yield trials in North Central Oregon and the Willamette Valley. In these trials, ORSS-1757 was evaluated and selected for grain yield, yield stability, adaptation, grain quality, and response to major diseases of the Northwest, including Stripe rust, Leaf rust, Septoria leaf blotch, Cercosporella herpotrichoides, Cephalosporium stripe, and Fusarium crown rot.

For each year from the F6 generation through release, ORSS-1757 was evaluated and selected for end-use quality traits in comparison with major varieties Stephens and Madsen. The evaluations were conducted through the USDA-ARS Western Wheat Quality Laboratory in Pullman, Washington. Traits measured include kernel hardness, kernel weight, break flour and total flour yield, flour ash, flour protein, water absorption, cookie diameter, and sponge cake volume.

ORSS-1757 was evaluated over 28 site by year combinations in Oregon breeding trials from 2001 through 2004. It also was evaluated in the 2004 USDA-ARS Western Regional Uniform Soft Wheat Nursery.

In fall 2003, approximately 1,500 heads of ORSS-1757 were threshed, screened for seed color and seed size, and provided to Washington Foundation Seed for production of Breeder seed. These were planted as individual headrows and off-type rows were removed prior to bulk harvest of Breeder seed.

Evidence of Uniformity and stability

ORSS-1757 has been observed to be uniform and stable. From the F5 generation through its release as a variety in 2005, uniformity and stability were evaluated each year in multilocation replicated yield trials. From 2001 to 2004, Tubbs was evaluated in a total of 28 replicated yield trials in Oregon and in USDA-ARS sponsored Regional Nurseries.

ORSS-1757 may contain up to 5 red kernels per pound in Breeders, Foundation, Registered, or Certified classes of seed multiplication. ORSS-1757 also may contain up to a total of 1 in 10,000 combined of the naturally occurring variants: plants that are 8 to 15 cm taller or plants with bronze (red or tan) chaff spikes. These variants described are distinct within the variety and are stable and predictable with a degree of reliability comparable to other varieties of the same kind, and within recognized tolerances, when the variety is reproduced or reconstructed, and was originally part of the variety when released.

To further determine variants in kernel color, a phenol staining reaction was determined. It was observed that 10% of the kernels stained are ivory, with 81% are fawn, and 81% are light brown. No brown or brown-black staining kernels were observed.

Exhibit B - Statement of Distinctness

200500336

ORSS-1757 is most similar to the commercial varieties Tubbs and Weatherford. All are of the soft white market class, winter type, semi-dwarf, awned, and have similar levels of winterhardiness.

Tubbs and Weatherford carry the Pch-1 gene on the VPM-1 chromosome segment from Aegilops ventricosa which confers resistance to Strawbreaker foot rot (Pseudocercosporella herpotrichoides). ORSS-1757 does not carry this gene or chromosome segment.

As measured by the Pertin Single Kernel Characterization System, ORSS-1757 has significantly softer kernel texture as compared with Tubbs, Madsen, and Stephens.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Wheat (*Triticum* spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
State of Oregon; Oregon State Univ.	OR9801757	ORSS-1757

ADDRESS (*Street and No. or RD No., City, State, Zip Code and Country*)

c/o Office of Technology Transfer
Oregon State University, 312 Kerr Administration Bldg.
Corvallis, OR 97331-2140

FOR OFFICIAL USE ONLY

PVPO NUMBER

200500336

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., [0][9][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____. Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[1]
1 = Common
2 = Durum
3 = Club
4 = Other (Specify) _____

2. VERNALIZATION:

[2]
1 = Spring
2 = Winter
3 = Other (Specify) _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

[2] 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR: (boot stage)

[2]
1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF: (boot stage)

[1] 1 = Erect 2 = Recurved
[2] 1 = Not Twisted 2 = Twisted
[1] 1 = Wax Absent 2 = Wax Present

7. EAR EMERGENCE:

[1][4][0] Number of Days (Average)
[0][2] Number of Days Earlier Than * Stephens
Same As * _____
[ ][ ] Number of Days Later Than * _____

**Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial*

8. ANTHER COLOR:

[1] 1 = Yellow 2 = Purple

7

200500336

9. PLANT HEIGHT: (from soil to top of head, excluding awns)

[1][0][4] cm (Average)

[0][7] cm Taller Than Stephens *

Same As _____ *

[ ][ ] cm Shorter Than _____ *

10. STEM:

A. ANTHOCYANIN

[1] 1 = Absent 2 = Present

B. WAXY BLOOM

[1] 1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

[1] 1 = Absent 2 = Present

D. INTERNODE

[1] 1 = Hollow 2 = Semi-solid 3 = Solid

[4] Number of Nodes

E. PEDUNCLE

[3] 1 = Erect 2 = Recurved 3 = Semi-erect

[3][8] cm Length

F. AURICLE

[1] Anthocyanin: 1 = Absent 2 = Present

[1] Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

A. DENSITY

[2] 1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

[1] 1 = Tapering
2 = Strap
3 = Clavate
4 = Other (Specify) _____

C. CURVATURE

[2] 1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

[4] 1 = Awnless
2 = Apically Awnletted
3 = Awnletted
4 = Awned

12. GLUMES: (At Maturity)

A. COLOR

[1] 1 = White
2 = Tan
3 = Other (Specify) _____

B. SHOULDER

[1] 1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (Specify) _____

C. SHOULDER WIDTH

[1] 1 = Narrow
2 = Medium
3 = Wide

D. BEAK

[3] 1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

[2] 1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

[2] 1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

G. WIDTH

[2] 1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Long (ca. 4mm)

13. SEED:

A. SHAPE

[2] 1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

[1] 1 = Rounded
2 = Angular

C. BRUSH

[2] 1 = Short
2 = Medium
3 = Long

1 = Not Collared
2 = Collared

D. CREASE

[1] 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1] 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

200500336

[1] 1 = White
2 = Amber
3 = Red
4 = Other (Specify) _____

F. TEXTURE

[2] 1 = Hard
2 = Soft
3 = Other (Specify) _____

G. PHENOL REACTION (See Instructions)

[**] 1 = Ivory
2 = Fawn
3 = Light Brown
4 = Dark Brown
5 = Black

H. SEED WEIGHT

[3][8] g/1000 Seed (Whole number only)

I. GERM SIZE

[3] 1 = Small
2 = Midsize
3 = Large

14. DISEASE: PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

[0]	Stem Rust (*Puccinia graminis* f. sp. *tritici*)	[0]	Leaf Rust (*Puccinia recondita* f. sp. *tritici*)
[2]	Stripe Rust (*Puccinia striiformis*)	[0]	Loose Smut (*Ustilago tritici*)
[0]	Tan Spot (*Pyrenophora tritici-repentis*)	[0]	Flag Smut (*Urocystis agropyri*)
[0]	Halo Spot (*Selenophoma donacis*)	[0]	Common Bunt (*Tilletia tritici* or T. *laevis*)
[0]	*Septoria nodorum* (Glume Blotch)	[0]	Dwarf Bunt (*Tilletia controversa*)
[0]	*Septoria avenae* (Speckled Leaf Disease)	[0]	Karnal Bunt (*Tilletia indica*)
[1]	*Septoria tritici* (Speckled Leaf Blotch)	[0]	Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)
[0]	Scab (*Fusarium* spp.)	[0]	"Snow Molds"
[0]	"Black Point" (Kernel Smudge)	[3]	Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)
[0]	Barley Yellow Dwarf Virus (BYDV)	[0]	Rhizoctonia Root Rot (*Rhizoctonia solani*)
[0]	Soilborne Mosaic Virus (SBMV)	[0]	Black Chaff (*Xanthomonas campestris* pv. *translucens*).
[0]	Wheat Yellow (Spindle Streak) Mosaic Virus	[0]	Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)
[0]	Wheat Streak Mosaic Virus (WSMV)	[1]	Other (Specify) Strawbreaker footrot
[ ]	Other (Specify) _____	[3]	Other (Specify) Cephalosporium stripe
[ ]	Other (Specify) _____	[ ]	Other (Specify) _____
[ ]	Other (Specify) _____	[ ]	Other (Specify) _____

15. INSECT: (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

[0]	Hessian Fly (*Mayetiola destructor*)	[ ]	Other (Specify) _____
[0]	Stem Sawfly (*Cephus* spp.)	[ ]	Other (Specify) _____
[0]	Cereal Leaf Beetle (*Oulema melanopa*)	[ ]	Other (Specify) _____

15. INSECT: (continued) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

200500336

PLEASE SPECIFY BIOTYPE (Where Needed)

0	Russian Aphid (*Diuraphis noxia*)		Other (Specify) _____
0	Greenbug (*Schizaphis graminum*)		Other (Specify) _____
0	Aphids		Other (Specify) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

** Phenol reaction: 10% Ivory; 81% Fawn; 12% Light Brown.

Exhibit D. Additional Description of the Variety

ORSS-1757 is soft white winter wheat (Triticum aesivum L.) developed and released by Agricultural Experiment Station of Oregon State University. ORSS-1757 is noted for its superior end-use quality for the soft white market class. Seed of ORSS-1757 has been deposited in the USDA National Small Grains Collection, Aberdeen, Idaho. It is requested that the source of this material be acknowledged in future use by wheat breeding and genetics programs.

ORSS-1757 is unique in that is has very soft kernel texture. When compared using the Pertin Single Kernel Characterization System, ORSS-1757 has average grain hardness of 16.2 units, averaging 16 points lower than Stephens and 25.8 points lower than Madsen. The soft kernel texture of ORSS-1757 contributes to high average break flour yields when milled on a modified Quadromat Senior experimental grain mill. Break flour yield is an important indicator of soft wheat quality. Average grain protein of ORSS-1757 has been significantly as compared with check varieties such as Stephens or Madsen. ORSS-1757 has normal amylose starch type, but higher starch viscosity than Stephens and Madsen. ORSS-1757 has superior baking quality among soft wheats, as indicated by higher values for cookie diameter and sponge cake volume.

ASSESSMENT OF THE QUALITY OF

OR9801757

SOFT WHITE WINTER WHEAT

C. F. Morris & D. A. Engle
USDA-ARS Western Wheat Quality Lab
February 2004

Following is an assessment of the quality of OR9801757. Assessment of wheat quality involves data interpretation and therefore may vary accordingly. Data are from the Western Wheat Quality Lab (WWQL) Annual Crop Reports and represent standard cultivar development and nursery testing procedures.

Nurseries and the corresponding WWQL Annual Report nursery number are described in Table 1a. Due to environmental effects, experimental genotypes are evaluated by comparison to check varieties grown in the same nursery (same location-year) to minimize environmental effects. For statistical purposes a limited number of check varieties are used. These are generally selected on the basis of class, current production, occurrence in nurseries, and known quality attributes. Statistical analyses are conducted as essentially paired t-tests using balanced designs. N (the number of paired comparisons) varies according to the test conducted. Tables 1b present the analysis of variance by check variety for each quality parameter. LSDs assume an α = 0.05. Data used for analysis is available on request.

Table 1b. Nursery Sources For OR9801757 Data Set

YEAR	NURSCO	NURNAME	LOCATION	BREDNAME
00	41	SOFT WHITE ELITE	PENDLETON	C.J. PETERSON
01	22	SOFT WHITE ELITE	PENDLETON	C.J. PETERSON
02	81	SWW ELITE	PENDLETON	C.J. PETERSON
03	1137	G&E OREGON SOFT WINTER	ARLINGTON	C.F. MORRIS
03	2137	G&E OREGON SOFT WINTER	CONDON	C.F. MORRIS
03	3137	G&E OREGON SOFT WINTER	CORVALLIS	C.F. MORRIS
03	4137	G&E OREGON SOFT WINTER	HERMISTON	C.F. MORRIS
03	5137	G&E OREGON SOFT WINTER	PENDLETON	C.F. MORRIS
03	6137	G&E OREGON SOFT WINTER	KASEBERG	C.F. MORRIS
98	1041	SWW PRELIMINARY YIELD TRIAL	PENDLETON	C.J. PETERSON
99	100	SWW REPLICATED PRELIMINARY	PENDLETON	C.J. PETERSON

Table 6a. Means from paired t test comparisons of end use quality traits for soft white varieties and selections. USDA-ARS WWQL.

	N	Test weight lb/bu		Kernel wt. gm		Grain protein %		Hardness SKCS		Break flour yield %		Flour yield %		Flour ash %	
OR9801757	10	60.43		37.58		9.92	*	16.15	*	51.28	*	67.58		0.38	
Stephens		58.8		39.48		11.87		31.38		46.03		65.97		0.39	
OR9801757	10	60.43		37.58	*	9.92	*	16.15	*	51.28	*	67.58		0.38	
Madsen		60.23		34.42		11.8		41.91		48.48		67.48		0.36	
OR9801757	7	60.14		37.04		10.27		18.41	*	50.44	*	66.27		0.38	
Tubbs		58.84		37.5		11.47		41.76		45.73		64.63		0.39	
OR9801757	7	60.14		35.49		10.83	*	20.21		50.31		66.54		0.38	
OR9900553		59.7		35.31		12.19		19.41		50.44		66.89		0.39	

Table 6a, Concluded.

	N	Milling score		Flour protein %		Starch Viscosity RVA		Absorption %		Cookie Diameter cm		Sponge cake vol. cc	
OR9801757	10	82.97		8.5	*	161	*	52.3		9.45	*	1339	*
Stephens		80.08		10.35		138		54.7		9.08		1210	
OR9801757	10	82.97		8.5	*	161	*	52.3	*	9.45	*	1339	*
Madsen		84.06		10.23		126		54.8		9.01		1231	
OR9801757	7	81.3		8.9		158	*	51.4		9.36	*	1344	*
Tubbs		78.67		9.76		129		53.55		8.95		1238	
OR9801757	7	81.37		9.41	*	166	*	51.8		9.41		1355	
OR9900553		81.43		10.73		180		53.35		9.34		1353	

* Signicant difference in paired mean values at P<0.05 based on t-test.

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200500336

INTERPRETIVE SUMMARY FOR OR9801757

As compared to Stephens, Madsen, Tubbs, OR9900553:

Test weight is similar to all checks.

Grain protein is less than Madsen, Stephens and OR9900553; similar to Tubbs.

Kernel weight is greater than Madsen; similar to all other checks.

Milling performance is similar to all checks.

Flour protein is less than Madsen, Stephens and OR9900553; similar to Tubbs.

Flour pasting (RVA, FSV) indicates normal amylose content starch.

Dough water absorption is less than Madsen; similar to all other checks.

Cookie baking performance is greater than Madsen, Stephens and Tubbs (0.4 cm); similar to OR9900553.

Cake baking performance is greater than Madsen, Stephens and Tubbs (over 100 cc); similar to OR9900553.

Overall, OR9801757 has good grain and milling properties. OR9801757 has noteworthy ability to produce low protein content grain. End-use quality is very good with marked improvement in cookie and cake performance of commonly grown varieties. Release of OR9801757 can be justified on quality considerations alone.

Release and production of OR9801757 would increase the overall quality of the wheat crop in Oregon.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)

State of Oregon, by and through the State Board of Higher Education on behalf of Oregon State University

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

OR9801757

3. VARIETY NAME

ORSS-1757

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*

c/o Office of Technology Transfer
Oregon State University
312 Kerr Administraiton Bldg
Corvallis, OR 97331-2140

5. TELEPHONE *(Include area code)*

(541) 737-0674

6. FAX *(Include area code)*

(541) 737-3093

7. PVPO NUMBER

200500336

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☑ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☑ **YES** ☐ **NO**

10. Is the applicant the original owner? ☑ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☑ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

Dr. C. James Peterson, the original breeder of the subject variety, is an employee of Oregon State University and by agreement between Oregon State University and C. James Peterson, all inventions, including new plant varieties, developed by C. James Peterson belong to Oregon State University.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.